

ABSTRACT

[0087] Provided is a method for producing a high-strength superplastic material which enables a high-strength superplastic material having a metal structure formed from fine grains to be easily obtained. After the application of an ultrasonic wave to a metal material, this metal material is subjected to a heating treatment at a temperature obtained by multiplying a melting point of the material represented by absolute temperature by 0.35 to 0.6. The most suitable metal material is a high damping metal material having a specific damping capacity of not less than 10% and, in particular, Mg or an Mg alloy.